

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method comprising:
selectively depositing a collar material between a number of memory containers, wherein the collar material along a side of a first memory container of the number of memory containers is in contact with the collar material along a side of a second memory container, a distance between the side of the first memory container and the side of the second memory container is S, and wherein an opening exists between the collar material along a corner of the first memory container and the collar material along a corner of a third memory container, a distance between the corner of the first memory container and the corner of the third memory container is L, and wherein the distance L is greater than the distance S.
2. (Original) The method of claim 1, wherein selectively depositing the collar material between the number of memory containers comprises selectively depositing a boron-doped carbon film material between the number of memory containers.
3. (Original) The method of claim 1, wherein at least one side of the number of memory containers includes a double-sided capacitor.
4. (Original) The method of claim 3, wherein an electrode of the double-sided capacitor includes poly silicon.
5. (Original) The method of claim 1, wherein selectively depositing the collar material between the number of memory containers comprises selectively depositing the collar material on a borophosphosilicate glass between the number of memory containers.

6. (Original) The method of claim 1, wherein selectively depositing the collar material between the number of memory containers comprises selectively depositing the collar material on a tetraethylortho-silicate material between the number of memory containers.

7. (Original) A method for forming an array of memory, the method comprising:
forming a number of memory containers in a mold, wherein a first memory container of the number of memory containers is located in a first direction from a first adjacent memory container of the number of memory containers and wherein the first memory container is located in a second direction from a second adjacent memory container of the number of memory containers; and

depositing a collar material between the number of memory containers, wherein a part of the collar material along a side wall of the first memory container is in contact with a part of the collar material along a side wall of the first adjacent container in the first direction and wherein a part of the collar material along a second side wall of the first memory container is not in contact with a part of the collar material along a side wall of the second adjacent container in the second direction.

8. (Original) The method of claim 7, wherein forming the number of memory containers in the mold comprises forming the first memory container to be substantially diagonal to the second adjacent memory container.

9. (Original) The method of claim 7, wherein forming the number of memory containers in the mold comprises forming the number of memory containers in a borophosphosilicate glass.

10. (Original) The method of claim 7, wherein forming the number of memory containers in the mold comprises forming the number of memory containers in a tetraethylortho-silicate.

11. (Original) The method of claim 7, wherein forming the number of memory containers in the mold comprises forming the number of memory containers in SiLK.

12. (Original) A method comprising:

arranging a number of memory containers in a mold, wherein a first memory container of the number of memory containers is located in a first direction from a first adjacent memory container of the number of memory containers and wherein the first memory container is located in a second direction from a second adjacent memory container of the number of memory containers; and

depositing a collar material between the number of memory containers, wherein a part of the collar material along a side of the first memory container is in contact with a part of the collar material along a side of the first adjacent container in the first direction and wherein a part of the collar material along a second side of the first memory container is not in contact with a part of the collar material along a side of the second adjacent container in the second direction.

13. (Original) The method of claim 12, further comprising removing the mold through an opening between the second side of the first memory container and the side of the second adjacent container.

14. (Original) The method of claim 13, wherein removing the mold through the opening between the second side of the first memory container and the side of the second adjacent container comprises etching the mold through the opening with hydrogen fluoride.

15. (Original) The method of claim 12, further comprising removing the collar material.

16. (Original) The method of claim 12, wherein arranging the number of memory containers in the mold comprises arranging the number of memory containers in phosphosilicate glass.

17. (Original) The method of claim 12, wherein arranging the number of memory containers in the mold comprises arranging the number of memory containers in a tetraethylortho-silicate.

18. (Currently amended) A method of fabricating an integrated circuit, the method comprising:

arranging a number of semiconductor containers in a borophosphosilicate glass (BPSG) material, wherein a first semiconductor container of the number of semiconductor containers is located a first distance, S , from a first adjacent semiconductor container of the number of ~~memory~~ semiconductor containers in a first direction and wherein the first semiconductor container is located a second distance, L , from a second adjacent semiconductor container of the number of semiconductor containers in a second direction;

selectively depositing a collar material as spacers along side walls of the semiconductor containers, wherein the spacers are thicker than $S/2$ and thinner than $L/2$;

performing a dry etch to remove the BPSG material between the first semiconductor container and the second adjacent semiconductor container along the second direction; and

performing a selective wet etch to remove remaining BPSG material.

19. (Original) The method of claim 18, wherein selectively depositing a collar material comprises selectively depositing a boron-doped carbon film material.

20. (Original) The method of claim 18, wherein selectively depositing a collar material comprises selectively depositing a silicon nitride material.

21. (Original) The method of claim 18, further comprising removing the collar material after performing the dry etch and performing the selective wet etch.

22. (Original) The method of claim 21, wherein removing the collar material comprises plasma etching the collar material.

23. (Original) The method of claim 22, wherein plasma etching the collar material comprises plasma etching the collar material at a pressure at approximately 1 Torr.

24. (Original) A method comprising:

forming a number of memory containers in a mold, wherein a first memory container of the number of memory containers is located a first distance, S , from a first adjacent memory container of the number of memory containers in a first direction and wherein the first memory container is located a second distance, L , from a second adjacent memory container of the number of memory containers in a second direction;

etching the mold to a depth that is at least greater than the second distance, L ;

depositing a collar material between the number of memory containers;

selectively removing the collar material, wherein the collar material is thicker than $S/2$ and thinner than $L/2$ along side walls of the number of memory containers;

removing the mold located between the first memory container and the second adjacent memory container between the collar material;

removing remaining mold; and

removing the collar material.

25. (Original) The method of claim 24, wherein forming the number of memory containers in a mold comprises forming the number of memory containers in phosphosilicate glass.

26. (Original) The method of claim 24, wherein forming the number of memory containers in the mold comprises forming the number of memory containers in tetraethylortho-silicate.

27. (Original) The method of claim 24, wherein forming the number of memory containers in the mold comprises forming the number of memory containers in SiLK.

28. (Original) The method of claim 24, wherein depositing the collar material between the number of memory containers comprises depositing silicon nitride between the number of memory containers.

29. (Original) The method of claim 24, wherein removing the mold located between the first memory container and the second adjacent memory container between the collar material comprises performing a dry etch of the mold located between the first memory container and the second adjacent memory container between the collar material.

30. (Original) The method of claim 24, wherein removing the mold located between the first memory container and the second adjacent memory container between the collar material comprises etching of the mold, using an acetic acid and hydrogen fluoride, located between the first memory container and the second adjacent memory container between the collar material.

31. (Original) A method for fabricating an array of memory cells, the method comprising: forming a number of memory containers in a borophosphosilicate glass (BPSG) material, wherein a first memory container of the number of memory containers is located in a first direction from a first adjacent memory container of the number of memory containers and wherein the first memory container is located in a second direction from a second adjacent memory container of the number of memory containers;

depositing a collar material, comprised of silicon nitride, between the number of memory containers, wherein the collar material along a side wall of the first memory container is in contact with the collar material along a side wall of the first adjacent container in the first direction and wherein the collar material along a second side wall of the first memory container is not in contact with the collar material along a side wall of the second adjacent container in the second direction;

performing a dry etch to remove the BPSG material located between the first memory container and the second adjacent memory container between the collar material; and

performing a wet etch to remove remaining BPSG material.

32. (Original) The method of claim 31, wherein performing the wet etch to remove remaining BPSG material comprises performing a hydrogen fluoride-based wet etch to remove remaining BPSG material.

33. (Original) The method of claim 31, wherein forming the number of memory containers in the BPSG material comprises forming a liner comprised of titanium nitride within the number of memory containers.

34. (Original) The method of claim 31, wherein forming the number of memory containers in the BPSG material comprises forming an electrode comprised of poly silicon.

35. (Original) The method of claim 31, further comprising etching the collar material based on an H₂ plasma.

36. (Original) A method for forming a memory array, the method comprising:

forming a number of memory containers in a tetraethylortho-silicate (TEOS), wherein a first memory container of the number of memory containers is located in a first direction from a first adjacent memory container of the number of memory containers and wherein the first memory container is located in a second direction from a second adjacent memory container of the number of memory containers; and

depositing a collar material, that includes boron doped carbon film, between the number of memory containers, wherein the collar material along a first side wall of the first memory container is in contact with the collar material along a side wall of the first memory adjacent container in the first direction and wherein the collar material approximately along a corner of the first memory container is not in contact with the collar material approximately along a corner of the second adjacent memory container in the second direction.

37. (Original) The method of claim 36, further comprising dry etching, with hydrogen fluoride, the TEOS located between the corner of the first memory container and the corner of the second adjacent memory container in the second direction.

38. (Original) The method of claim 37, further comprising wet etching remaining TEOS.

39. (Original) The method of claim 38, further comprising etching the collar material with H₂-based plasma.
40. (Original) The method of claim 39, wherein etching the collar material with H₂-based plasma includes etching the collar material with H₂-based plasma at a pressure of approximately 1 Torr.
41. (Original) The method of claim 36, further comprising depositing a spin-on glass on the number of memory containers prior to depositing the collar material.
42. (Original) A method for forming an integrated circuit, the method comprising:
forming a number of memory containers in a mold on a substrate, wherein a first memory container of the number of memory containers is located in a first direction from a first adjacent memory container of the number of memory containers and wherein the first memory container is located in a second direction from a second adjacent memory container of the number of memory containers;
depositing a negative tone resist over the substrate; and
forming a pattern in the negative tone resist, wherein an opening is formed between the first memory container and the second adjacent memory container.
43. (Original) The method of claim 42, wherein forming the number of memory containers in a mold on the substrate comprises forming the number of memory containers in a phosphosilicate glass on the substrate.
44. (Original) The method of claim 42, wherein forming the number of memory containers in a mold on the substrate comprises forming the number of memory containers in a tetraethylortho-silicate on the substrate.

45. (Original) The method of claim 42, wherein forming the number of memory containers in a mold on the substrate comprises forming the number of memory containers in a SiLK on the substrate.

46. (Original) A method for forming a memory, the method comprising:
forming a number of memory containers in a mold on a substrate, wherein a first memory container of the number of memory containers is located in a first direction from a first adjacent memory container of the number of memory containers and wherein the first memory container is located in a second direction from a second adjacent memory container of the number of memory containers;
depositing a positive tone resist over the substrate; and
vapor etching the mold, through the positive tone resist, between the number of memory containers on the substrate.

47. (Original) The method of claim 46, wherein the vapor etching of the mold comprises vapor etching the mold with hydrogen fluoride.

48. (Original) The method of claim 46, wherein forming the number of memory containers in a mold on the substrate comprises forming the number of memory containers in a borophosphosilicate glass on the substrate.

49. (Original) The method of claim 46, wherein forming the number of memory containers in a mold on the substrate comprises forming the number of memory containers in a tetraethylortho-silicate on the substrate.

50-91. (Canceled)

92. (New) The method of claim 1, wherein the collar material between the side of the first memory container and the side of the second memory container is greater than $S/2$ and wherein the collar material between the corner of the first memory container and the corner of the third memory container is less than $L/2$.

93. (New) A method comprising:

selectively depositing a boron-doped carbon film collar material between a number of memory containers, wherein the boron-doped carbon film collar material along a side of a first memory container of the number of memory containers is in contact with the boron-doped carbon film collar material along a side of a second memory container wherein an opening exists between the collar material along a corner of the first memory container and the boron-doped carbon film collar material along a corner of a third memory container.